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cont'd

b) adding to the reaction well an HIV RT enzyme chosen from a wild-type RT enzyme, wherein said HIV RT enzyme incorporates the at least one detectable dNTP substrate or the at least one HIV RT inhibitor into said template;

c) determining RT activity by measuring the amount of the detectable dNTP substrate incorporated into the template;

d) repeating steps b) and c) replacing the wild-type RT enzyme with a mutant RT enzyme

e) determining the level of resistance of HIV to the HIV RT inhibitor by comparing the RT activity of the wild-type RT enzyme with the RT activity of the mutant RT enzyme.

21. (Amended) A method for rapid screening the effects of mutations on HIV resistance to an HIV RT inhibitor comprising:

A3

a) providing an array of reaction wells, each reaction well comprising:

at least one template for an HIV RT enzyme,

at least one primer,

at least one detectable dNTP substrate,

at least one HIV RT inhibitor, and

at least one ribonucleotide chosen from ATP or GTP or at least one pyrophosphate;

b) adding to each reaction well a different HIV RT enzyme chosen from a wild-type RT enzyme or a mutant RT enzyme, wherein said HIV RT enzyme incorporates the at least one detectable dNTP substrate or the at least one HIV

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RT inhibitor into said template and wherein at least one wild-type RT enzyme is added to at least one reaction well;

c) determining RT activity in each reaction well by measuring the amount of the detectable dNTP substrate incorporated into the template; and

d) determining the effect of mutations on HIV resistance to the HIV RT inhibitor by comparing the RT activity of at least one wild-type RT enzyme with the RT activity of at least one mutant RT enzyme.

REMARKS

Claims 1-21 are pending in this application. The Examiner has withdrawn claims 15-19 from consideration. Applicants thank the Examiner for rejoining Groups I and V to facilitate prosecution. Claims 1 and 21 have been amended to clarify claim language by explaining in more detail the steps of the claimed methods. The scope of claims 1 and 21 have not been narrowed by these amendments.

Objections

The disclosure was objected to because page 4 contained two hyperlinks.

Applicants have amended the specification to correct these informalities. No new matter was introduced. Applicants respectfully request that these objections be withdrawn.

Rejection under § 112, second paragraph